<center>**REMARKS/ARGUMENTS**</center>

Claims 1-18 are pending in the application. The Applicant hereby requests further examination and reconsideration of the application in view of these remarks.

Prior-Art Rejections

In pages 2-6 of the Office Action, the Examiner rejected claims 1-3, 5-6, 8, and 11-15 under 35 U.S.C. §103 as being anticipated by Doshi et al. (U.S. Pat. No. 6,130,875) in view of Kodialam et al (U.S. Pat. App. Pub. No. 2002/0067693 A1). In pages 6-7, the Examiner rejected claim 12 under 35 U.S.C. §103(a) as unpatentable over Doshi.

Allowable Subject Matter

In page 7 of the Office Action, the Examiner stated that claim 18 is allowable and claims 4, 7, 9-10, and 16-17 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 1

In rejecting claim 1, the Examiner argues that Doshi teaches "generating a path cost associated with said each candidate path pair, wherein the path cost for a candidate path pair is a function of sharability of one or more links within the corresponding restoration path." The Examiner cites col. 25, lines 30-38, of Doshi as specifically disclosing this feature.

The Applicant submits that the Examiner's above-quoted language differs significantly from the language of claim 1 which actually recites "generating a path cost associated with said each candidate path pair, wherein the path cost for a candidate path pair is a function of two or more link costs, wherein each link cost is a function of sharability of a different corresponding link within the corresponding candidate restoration path." The Applicant further submits that the cited section of Doshi does not teach this requisite feature of claim 1. The cited section of Doshi discloses ordering route pairs in accordance with their respective G indices.

Assuming *arguendo* that Doshi's G function teaches generating a result based on sharability, which Applicant does not admit, the G function does <u>not</u> produce a result based on link costs of <u>two or more links</u> in a candidate restoration path, as required by claim 1, but rather produces a result based, at most, on the characteristics of a <u>single link</u> in a restoration path of a candidate path pair consisting of a primary path and the restoration path.

The calculation of the G(r, λ, s, μ) index for a path pair is described in column 23 of Doshi. As described, the index may be obtained in any one of four different ways, each involving both the primary path and the restoration of a candidate path pair:

> (1) the minimum, across all links on a given pair of routes, of free capacity for selected wavelengths; (2) the index in (1) divided by the total number of links in the two routes; (3) a constant α multiplied by the minimum free capacity on a primary route plus a constant [β] multiplied by the minimum free capacity on a restoration path; or (4) α multiplied by the min[i]mum free capacity on the primary divided by the number of links in the primary, plus [β] multiplied by the minimum free capacity on the restoration divided by the number of links in the restoration.

In each of these four methods, the calculated index value is a function of no more than one single link of the restoration path. In two methods, the index is based on the one narrowest link of a pair of paths. In the other two methods, the index is based on the one narrowest link of the primary path and the one narrowest link of the restoration path. None of the disclosed methods teaches a calculation of a path cost based on link costs of two or more links within the corresponding candidate restoration path, as required by claim 1. Thus, it cannot be said that Doshi teaches this requisite feature of claim 1.

The Examiner admits that Doshi does not teach the feature "that the link cost is a function of the sharability of different corresponding links, wherein the sharability of the corresponding link corresponds to the ability of the corresponding link to reserve protection bandwidth that is shared between restoration paths of two or more primary paths," but argues that Kodialam teaches this feature. The Examiner cites paragraphs 27 and 30 of Kodialam as specifically teaching this feature. The Applicant submits that the Examiner's above-quoted language differs significantly from the language of claim 1, which recites that "each link cost is a function of sharability of a different corresponding link within the corresponding candidate restoration path, wherein . . . ." The Applicant further submits that the cited sections of Kodialam do not teach this requisite feature.

Paragraphs 27 and 30 of Kodialam do not disclose anything about link costs, and thus cannot be said to teach generating a link cost as a function of sharability. Thus, it cannot be said that the cited sections of Kodialam teach this requisite feature of claim 1.

Applicant submits therefore that claim 1 is allowable over Doshi in view of Kodialam. For similar reasons, Applicant submits that claim 11 is also allowable over Doshi in view of

Kodialam. Since claims 2-10 and 14-17 depend variously from claim 1, and claims 12-13 depend from claim 11, it is further submitted that those claims are also allowable over the cited references.

Claim 2

In rejecting claim 2, the Examiner admits that Doshi does not teach "wherein generating the path cost for each candidate path pair comprises: generating a link cost associated with each link in the corresponding candidate restoration path; and generating the path cost as a function of a sum of the link costs for all links in the candidate restoration path," but argues that Kodialam teaches this feature. The Examiner cites paragraph 56 of Kodialam as specifically teaching this feature. The Applicant submits, however, that the cited section does not teach this requisite feature.

Paragraph 56 of Kodialam teaches that "[t]he cost of using link l(i, j) may then be calculated as the sum of [(1)] the cost of using link l(i, j) on the active path and [(2)] the cost of its bypass path," and that "[t]he 'usage' cost of using a link l(i, j) on the active path is the sum of [(1)] the bandwidth usage on the link l(i, j) and [(2)] bandwidth usage for the bypass of the link l(i, j)." Thus, paragraph 56 discloses adding (1) a cost associated with a link of the active path and (2) a cost associated with the bypass path for that link. The cited section does not teach summing the link costs for all links in the candidate restoration path to generate the path cost for a candidate path pair, as required by claim 2. Thus, it cannot be said that Kodialam teaches this requisite feature of claim 2.

Applicant submits that this provides further reasons for the allowability of claim 2 over the cited references. Since claims 3-7 and 15-17 depend variously from claim 2, this also provides further reasons for the allowability of those claims over the cited references.

Claim 3

In rejecting claim 3, the Examiner admits that Doshi does not teach "if sharing is available, then generating the link cost as a function of a sharing degree for the link; wherein the sharing degree is the maximum number of additional unit-bandwidth primary services that can be added to the candidate primary path without increasing bandwidth reserved on [the] link," but argues that Kodialam teaches this feature. The Examiner cites paragraph 30 of Kodialam as specifically teaching this feature. The Applicant submits, however, that the cited section does not teach this requisite feature.

Paragraph 30 of Kodialam discusses inter-demand and intra-demand sharing of capacity on a backup path. Neither the cited section, nor any other part of Kodialam even mentions the term "maximum," let alone teaches calculating the maximum number of additional unit-bandwidth primary services that can be added to a candidate primary path without increasing restoration bandwidth reserved on a link. Thus, it cannot be said that the cited references teach this requisite feature of claim 3.

Applicant submits that this provides further reasons for the allowability of claim 3 over the cited references. Since claims 4-7 and 16-17 depend variously from claim 3, this also provides further reasons for the allowability of those claims over the cited references.

Fees

During the pendency of this application, the Commissioner for Patents is hereby authorized to charge payment of any filing fees for presentation of extra claims under 37 CFR 1.16 and any patent application processing fees under 37 CFR 1.17 or credit any overpayment to Mendelsohn & Associates, P.C. Deposit Account No. 50-0782.

The Commissioner for Patents is hereby authorized to treat any concurrent or future reply, requiring a petition for extension of time under 37 CFR § 1.136 for its timely submission, as incorporating a petition for extension of time for the appropriate length of time if not submitted with the reply.

In view of the above amendments and remarks, the Applicant believes that the now pending claims are in condition for allowance. Therefore, the Applicant believes that the entire application is now in condition for allowance, and early and favorable action is respectfully solicited.

Respectfully submitted,

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